Department for Energy Security & Net Zero

Andrew Bowie MP
Minister for Nuclear and Networks
1 Victoria Street
London
SW1H 0ET

www.gov.uk

Sir Edward Mountain MSP
The Convener: Net Zero, Energy and Transport committee
The Scottish Parliament
Edinburgh
EH99 1SP

Copy to Maggie Chapman MSP

15 May 2023

Dear Sir Edward,

While giving evidence to your committee on 28 April, I agreed to write with further details regarding electricity resilience and “beyond the grid”.

First, to reassure you, the UK has highly resilient electricity and gas networks. The Government is committed to maintaining our high levels of energy resilience across all threats and hazards, including the impacts of climate change. The Government works closely with industry to continually improve and maintain the resilience of old and new energy infrastructure, networks and assets, to reduce vulnerabilities and ensure an effective response to actual or potentially disruptive incidents.

With regards to investment in the networks, as you will be aware, network regulation is a matter for Ofgem, the independent regulator. The government works closely with Ofgem as they set a regulatory framework for networks to ensure they are ready for net zero. As part of the electricity distribution network framework, which sets the allowances for networks for the lower voltage network which comes to consumers’ homes, Ofgem has allocated £22.2bn of investment, which includes £3.1bn for network upgrades. These upgrades will ensure the network has adequate capacity for consumers’ demand as more low-carbon technologies, like heat pumps and electric vehicles connect to the grid, as well as accommodating smaller-scale, local renewable generation on the distribution network.

Within the electricity distribution network price control, Ofgem have also provided significant funding for improvements in data and digitalisation and network monitoring equipment that will help support a smarter, more flexible and digitalised energy system. This is key to delivery of the commitments the government and Ofgem have made jointly, as set out in the Smart Systems and Flexibility Plan and Energy Digitalisation Strategy. This is essential for integrating high volumes of low carbon power, heat and transport which could reduce overall system costs up to £10 billion per year by 2050, including by helping to support flexibility to better balance supply and demand at the local level.

They have also improved service-level requirements especially in relation to the need for resilience in light of extreme weather events like Storm Arwen, and to speed up connections of low carbon technologies, a commitment in the British Energy Security Strategy.

The Government recognises that local areas can, and do, play an essential role in driving local climate action and throughout the UK there are brilliant examples of local action, innovation, and excellence. The Net Zero Strategy and Net Zero Growth Plan sets out our commitments to enable local areas to deliver net zero. This includes funding five Local Net Zero Hubs to support local authorities to develop net zero projects and attract commercial investment and running the Local Net Zero Forum to bring together national and local Government senior officials on a regular basis to discuss policy and delivery options on net zero. Through the Industrial Strategy Challenge Fund, government committed up to £104 million to support the Prospering from the Energy Revolution (PFER) programme, which completed the programme of work this March. This programme developed smart local energy systems to provide investable, scalable local business models and finance mechanisms, using integrated approaches to deliver cleaner, cheaper energy services.

We are supporting place-based energy system innovation through Innovate UK's £60 million Net Zero Living Programme. There have been two rounds of funding announced to date. This includes ‘Net Zero Pathfinders’ for UK registered businesses and local authorities to apply for a share of up to £2 million to plan for a place-based demonstration of ways to accelerate progress towards net zero, and ‘Fast Followers’ for local authorities to apply for a share of up to £6 million to build skills and capabilities to accelerate local progress towards net zero.

Yours aye,

Andrew Bowie MP
Minister for Nuclear and Networks

Department for Energy Security & Net Zero

Andrew Bowie MP
Minister for Nuclear and Networks

Department for Energy Security & Net Zero

www.gov.uk

Fiona Hyslop MSP
The Scottish Parliament
Edinburgh
EH99

15 May 2023

Dear Fiona,

Thank you for your question at the Net Zero, Energy and Transport Committee's inquiry on Scotland's electricity infrastructure on 27th April.

The Holistic Network Design Follow Up Exercise will be completed by National Grid Electricity Systems Operator in July this year and will be published as part of the Transitional Centralised Strategic Network Plan at the end of the year. The Transitional Centralised Strategic Network Plan replaces the previous Network Options Assessment (NOA), and includes broader reinforcements required across the onshore network (i.e. those reinforcements required to enable the flow of electricity across the transmission system, including those not related to offshore wind).

I trust this information will be helpful.

Yours aye,

Andrew Bowie MP
Minister for Nuclear and Networks

Department for Energy Security & Net Zero

Andrew Bowie MP
Minister for Nuclear and Networks

Department for Energy Security & Net Zero

www.gov.uk

Ash Regan MSP
The Scottish Parliament
Edinburgh
EH99

15 May 2023

Dear Ash,

Thank you for your question at the Net Zero, Energy and Transport Committee's inquiry on Scotland's electricity infrastructure on 27th April.

The Government acknowledges the valuable contribution of hydropower to the UK energy mix over many decades, including at times when other renewables do not generate. Hydropower accounts for approximately 2% of total electricity generation in the UK. Most hydro capacity was installed in Scotland in the first hydro revolution in the 1950s, with a smaller amount installed in Wales and England. Most current deployment is in small run of river projects which tend to be relatively expensive. Studies indicate that there is a maximum remaining technical potential of around 1.5GW for small-scale hydro, with the majority in Scotland, which represents 1% of total generation capacity so not a significant contributor to our future generation plans.

I trust this information will be helpful.

Yours aye,

Andrew Bowie MP
Minister for Nuclear and Networks